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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,510	03/12/2004	ChoonHoe Koh	STL11595	1740

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EXAMINER
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OLSON, JASON C

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/799,510	Applicant(s) KOH ET AL.	
	Examiner Jason C. Olson	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-14, 17-22, 24, 30, 32 and 34-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 11-14, 17-22, 24 and 32 is/are allowed.  
6) ☒ Claim(s) 1-6, 8, 10, 30, 34 and 35 is/are rejected.  
7) ☒ Claim(s) 7 and 36 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

The allowance of claims 34-36 and objection of claims 6 and 10 in the previous office action is currently withdrawn.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8, 10, 30, and 34-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirano et al. (US 6,754,027), hereafter “Hirano”.

Regarding claim 1, Hirano teaches an actuator configured to support a transducer (see figure 1B, items 4 and 5); and a position detector configured to determine a former stationary position (see col. 11, ln. 2-14; the reference position is a former stationary position because it is determined if the head reached (past tense) the reference distance) of the transducer based on a latter motion pattern of the actuator obtained from application of a current profile (see col. 17, ln. 43-57) of controlled variable magnitude to the actuator (see col. 11, ln. 2-14), wherein the actuator comprises a voice coil configured to provide a voltage to the position detector that includes a back-electromotive force component indicative of a movement of the voice coil across a magnetic field (see col. 11, ln. 46-60 and col. 19, ln. 16-25).

Regarding claim 2, Hirano teaches the current profile is applied to the voice coil motor (see col. 18, ln. 36-39).

Regarding claim 3, Hirano teaches a latch configured to urge the actuator toward a predetermined position (see col. 7, ln. 58-61 and figure 3; the ramp 6, latches the actuator by urging it toward a predetermined position 6-1).

Regarding claim 4, Hirano teaches at least one crash stop configured to limit a range of motion of the actuator (see col. 7, ln. 5).

Regarding claim 5, Hirano teaches the former stationary position comprises a position adjacent a data storage area of a storage disc (see co. 11, ln. 2-14; the reference position is on the disk, which is adjacent data storage areas).

Regarding claim 6, Hirano teaches the position detector comprises a processor configured to receive voltage measurements and to derive the former stationary position in relation to an arithmetic combination of the measurements (see col. 11, ln. 2-14 and col. 22, ln. 64-col. 22, ln. 3).

Regarding claim 8, Hirano teaches the actuator supports a plurality of additional heads adjacent at least one additional disc, the discs being mounted for co-rotation on a disc stack (see figure 40, items 138 and 140).

Regarding claim 10, Hirano teaches the position detector comprises an analog-to-digital converter operatively coupled across the voice coil and configured to sample the voltage provided by the voice coil (see col. 25, ln. 46-55 and figure 41, item 164).

Regarding claim 30, Hirano teaches where the applied current is sequentially increased from a first value to a maximum value and a second subsequent portion wherein the applied

current is sequentially decreased from the maximum value to the first value (see figure 8, the speed profile shows that current is applied from a first value to a maximum and then decreased from the maximum to the first value).

Regarding claims 34-35: Claims 34-35 have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above.

#### ***Allowable Subject Matter***

Claims 11-14, 17-22, 24, and 32 are allowable over the prior art of record. The prior art fails to teach alone or in combination generating a digital indication of a position of a transducer prior to the spinning up step in relation to an actuator motion pattern determined in relation to the applying step and a back electromotive force measured across a voice coil.

Claims 7 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach alone or in combination a programmable processor configured to spin-up a disc, detect the latter motion pattern after said spin-up, and generate a digital indication of a position of the transducer prior to said spin-up in relation to said latter motion pattern.

#### ***Response to Arguments***

Applicant's arguments, see pages 11-12, filed 5/23/06, with respect to the rejection(s) of claim(s) 1-5, 7-8, 11-12, 17, 19, 30, and 32 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further

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consideration, a new ground(s) of rejection is made in view of Hiram et al. (U.S. 6,754,027).

Claims 1-6, 8, 10, 30, and 34-35 are rejected as being anticipates under 35 U.S.C. 102(e) over Hiram et al.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C. Olson whose telephone number is (571)272-7560. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCO

August 2, 2006

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER